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Book Reviews

A. SCHINZEL, *Selected Topics on Polynomials*, Univ. of Michigan Press, 1982, 250 pp. To those who are tired of deciphering abstract commutative ring treatises, we recommend this book. It dishes it out straight and simple, and furthermore, it does not shun topics that commutative algebraists consider to be low-class, for example, Ritt's theory of functional composition of polynomials. The topics chosen here will make an entertaining introduction to the wonders of commutativity.

E. B. DYNKIN AND A. A. YUSHKEVICH, *Controlled Markov Processes*, Springer, 1979, 289 pp.

N. V. KRYLOV, *Controlled Diffusion Processes*, Springer, 1980, 308 pp. For a long time, Richard Bellman's ideas on optimization were outcasts of good mathematical society. Perhaps the choice of the name "dynamic programming" was a mistake. At any rate, these books signal a full rehabilitation, equipped as they come with a full blessing of fancy measure theory.

L. V. OVSIANNIKOV, *Group Analysis of Differential Equations*, Academic Press, 1982, 416 pp. Sophus Lie's motivation was to develop a theory of differential invariants, in parallel with the theory of algebraic invariants. For some reason, this objective was dropped. Now there is a belated recognition of the usefulness of Lie's ideas, and this book will probably be the second of a long line.

T. ROLSKI, *Stationary Random Processes Associated with Point Processes*, *Springer*, 1981, 130 pp.

C. PRESTON, *Random Fields*, Springer, 1976, 200 pp. There is a ferment of activity in all that is both stochastic and multidimensional, with the Mecca of phase transition on the horizon. At last we may begin to hope that probability will disentangle itself from the Martingale–Markov process one-dimensional straightjacket. It is an uplift to see an exposition of new ideas that can only be important.

G. KALLIANPUR, *Stochastic Filtering Theory*, Springer, 1980, 316 pp. The awesome machinery of stochastic integrals, in one of its many applications, makes a triumphal appearance in this impeccable treatise. The time is near when engineers will have to handle stochastic integrals. When that time comes, will they again pretend to be the inventors, as they have with every concept of mathematics they have appropriated?

GIAN-CARLO ROTA

EDITOR

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